11-18-04

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

(E JO	Application Number	10/643,680							
TRANSMITTAL	Filing Date	August 18, 2003							
FORM	First Named Inventor	Brenda D. Kraus							
NOV 1 2004 E FORM	Art Unit	1762							
(to be used loyall correspondence after initial filing)	Examiner Name	Unknown							
CATENT &	Attorney Docket Number	MI22-2310							
Total Number of Pages in This Submission		111111111111111111111111111111111111111							
ENCLOSURES (Check all that apply)									
Fee Transmittal Form	Drawing(s)	After Allowance Communication to TC							
Fee Attached	Licensing-related Papers	Appeal Communication to Board of Appeals and Interferences							
Amendment/Reply	Petition	Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)							
After Final	Petition to Convert to a Provisional Application	Proprietary Information							
Affidavits/declaration(s)	Power of Attorney, Revocation Change of Correspondence A	ddress Status Letter							
Extension of Time Request	Terminal Disclaimer	Other Enclosure(s) (please Identify below):							
Express Abandonment Request	Request for Refund	Return Receipt Postcard , PTO-1449, Cited References							
X Information Disclosure Statement	CD, Number of CD(s)								
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Printed name Mark S. Matkin									
Date 11/17/0	Y	Reg. No. 32,268							
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Patent Application Serial No	
Patent Application Serial No	August 18, 2003
Inventorship	Brenda D. Kraus et al
Assignee	Micron Technology, Inc
Group Art Unit	
Examiner	
Attorney's Docket No	MI22-2310
Title: Atomic Layer Deposition Methods Comprising Layers	

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

References - See Attached Form PTO-1449

In compliance with 37 C.F.R. §§ 1.56, 1.97 and 1.98, your attention is directed to the United States patents and other references listed on the attached Form PTO-1449. Pursuant to 1276 OG 55, August 5, 2003, no copies of cited U.S. patents or U.S. patent application publications are included, as the date of filing of this patent application occurs after June 30, 2003. No admission is made regarding whether all the submitted references are prior art.

This Supplemental Information Disclosure Statement is being filed within three months of the filing date of the application or before the mailing of a first Office Action on the merits, whichever occurs last. Therefore, no fee is believed to be required. However, in the event that a fee is required for filing this Supplemental Information Disclosure Statement, please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

Respectfully submitted,

Dated: 11-17-04

Mark S. Matkin Reg. No. 32,268

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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. MI22-2310

SERIAL NO. 10/643,680

IST OF ART CITED BY APPLICANT

(Use several sheets if necessary)

APPLICANT: Kraus et al.

FILING DATE August 18, 2003

GROUP 1762

U.S. PATENT DOCUMENTS

*Examiner's Initials		Document Number	Date	Name	Class	Subclass		ng Date propriate		
	AA	6,511,539	01/2003	Raaijmakers	117	102				
AB 6,576,053		06/2003	06/2003 Kim et al.		89					
	AC	6,753,618	06/2004	Basceri et al.	257	915				
	AD	6,780,704 2001/0024387 A1	08/2004	Raaijmakers	438	239	1			
	AE		09/2001	01 Raaijmakers		200				
	AF 2002/0182320 A1	12/2002	002 Leskela et al.		250					
AG 2003/0049931 A1	2003/0049931 A1	03/2003	Byun et al.	438	649					
	АН	2003/0082296 A1	05/2003	Elers et al.	427	96				
	AI	2003/0116087 A1	06/2003	Nguyen et al.	118	715				
FOREIGN F	ATENT	DOCUMENTS			1		· · · · · · · ·			
		Document Number						Translation		
•	AJ	WO 01/27346 A1	04/2001	WIPO			Yes	No		
	AK									
	AL									
					<u> </u>					
OTHER RE	FEREN	CES (including Author,	Title, Date, Pe	ertinent Pages, Etc.)						
	Juppo et al., "Use of 1,1-Dimethylhydrazine in the Atomic Layer Deposition of Transition Metal Ni									
		Films", Journa	l of the Electro	chemical Society, 147 (9), 2000, p. 3377-3	381.					
	AN	H. Kim, "Atomi	H. Kim, "Atomic layer deposition of metal and nitride thin films: Current research efforts and applications							
		for semiconductor device processing", J. Vac. Sci. Technol. B, Vol. 21, No. 6, Nov/Dec 2003, p. 220								
	AO	J. W. Klaus et	J. W. Klaus et al., Atomic Layer Deposition of Tungsten Nitride Films Using Sequential Surface Reaction							
		Journal of the Electrochemical Society, 147 (3), 2000, p. 1175-1181.								
	L	-								

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. PATENT AND TRADEMARK OFFICE MI22-2310 10/643,680 LIST OF ART CITED BY APPLICANT (Use several sheets if necessary) APPLICANT: Kraus et al. **FILING DATE GROUP** August 18, 2003 1762 **U.S. PATENT DOCUMENTS** Subclass *Examiner's Document Date Name Class Filing Date Initials Number If Appropriate AA 2003/0168750 A1 09/2003 Basceri et al. 257 915 AB 2003/0205729 A1 11/2003 Basceri et al. 257 200 AC AD ΑE AF AG AH ΑI FOREIGN PATENT DOCUMENTS Document Date Country Class Translation Number Yes No AJ AK OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.) J. W. Elam et al., "Surface chemistry and film growth during TiN atomic layer deposition using TDMAT and NH3", Elsevier Science B.V., 12 March 2003, p. 1-12. AN Juppo, "Atomic Layer Deposition of Metal and Transition Metal Nitride Thin Films and In Situ Mass

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Spectrometry Studies", Univ. of Helsinki, Dept. of Chemistry, 14 Dec. 2001, p. 1-65.

EXAMINER

AO

DATE CONSIDERED